

REMARKS

Status of the Claims

Claims 1-28 and 30-53 were previously pending. Claims 1, 3, 5, 7-9, 11-21, 23, 24, 33-35, 38, 42-52 have been withdrawn from consideration, leaving claims 2, 4, 6, 10, 22, 25-28, 30-32, 36, 37, 39-41 and 53 under consideration.

By virtue of this Response, claims 26, 30 and 43 have been amended; claims 6-21 have been canceled, without prejudice or disclaimer, and new claims 54 and 55 have been added.

Support for the amendment to independent claim 30 is found, for example, at page 2, lines 6-7 and 19-23 (identifying Cys and His as metal coordinating ligands that bind a Zn ion to stabilize the structure of a zinc finger) and at page 17, lines 23-25 (identifying Cys and His as zinc-coordinating amino acid residues).

Claims 26 and 43 have been amended to clarify antecedence.

New claims 54 and 55 have been added. Support for claim 54 is found, for example, at page 8, lines 14-17 and page 20, lines 24-27. Support for claim 55 is found, for example, at page 4, lines 15-17; page 16, lines 15-16; and page 20, line 17.

Accordingly, claims 1-5, 22-28 and 30-55 are pending and claims 2, 4, 22, 25-28, 30-32, 36, 37, 39-41 and 53-55 are under consideration.

Applicants note that all pending claims are directed to polynucleotides encoding non-naturally-occurring zinc finger proteins.

Restriction

Applicants note that method claims 42-51, identified as Group III in the Restriction Requirement dated July 1, 2004, contain all the limitations of the elected composition claims of Group II, and are therefore eligible for rejoinder upon allowance the composition claims.

35 U.S.C. 112, first paragraph

Claims 2, 4, 6, 10, 22, 25-28, 30-32, 36, 37, 39-41 and 53 were rejected as allegedly lacking written description because, although the amino acid sequences of the

claimed molecules are described in the specification as filed, it was asserted that no information regarding the ability of the disclosed sequences to form the claimed secondary structures, or to bind a target sequence, was provided. Advisory Action at pages 4-6.

Pending claim 30 recites non-canonical zinc fingers in which all zinc coordinating residues are either cysteine or histidine, but at least one of the two amino-terminal zinc coordinating residues is a histidine residue, or at least one of the two carboxy-terminal zinc coordinating residues is a cysteine residue. Thus, the claimed non-canonical zinc fingers do not have the canonical Cys-Cys-His-His structure.

Inasmuch as it is well-known in the art¹ and taught in the specification² that cysteine and histidine are the zinc-coordinating residues in zinc fingers, it would be clear to one of skill in the art that the claimed non-canonical zinc fingers are capable of adopting the zinc finger structure. Moreover, since the structure of a zinc finger is well-correlated with its ability to bind a target sequence,³ it would also be clear to one of skill that the polypeptides encoded by the claimed polynucleotides are capable of binding to a target sequence.

Accordingly, and inasmuch as all remaining claims ultimately depend from claim 30, Applicants believe that possession of the claimed subject matter has been conveyed to one of skill in the art and, therefore, the rejection can be withdrawn.

¹ See, for example, Rhodes *et al.*, Reference C114 of IDS filed May 11, 2005

² See, for example, page 1, lines 25-30; page 2, lines 6-7; page 2, lines 19-23 and page 17, lines 23-25

³ See, for example, Pavletich & Pabo, Reference C11 of IDS filed April 15, 2003

CONCLUSION

In light of the amendments and arguments presented above, it is believed that the present claims are in condition for allowance. The Examiner is invited to contact the undersigned if any issues remain unresolved.

Respectfully submitted,

Date: March 24, 2006

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